

# Shiyu (Rayne) Xu

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## EDUCATION

### University of Michigan - Ann arbor

Aug 2020 – May 2022 | Ann arbor, MI

Master of Science in Information (Human Computer Interaction)

Cumulative GPA: 4.0/4.0

Advisor: Prof. Steve Oney

### University of Wisconsin Madison

Sep 2016 – May 2020 | Madison, WI

B.S in Computer Science, Certificate in Graphic Design & Mathematics

GPA: 3.7/4.0

## PUBLICATIONS

- **Shiyu Xu**, Ashley Ge Zhang, Steve Oney  
*How Pairing by Code Similarity Influences Discussions in Peer Learning*  
Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems
- Parth Kirankumar Thakkar, Shijing He, **Shiyu Xu**, Danny Yuxing Huang, Yaxing Yao  
*"It would probably turn into a social faux-pas": Users' and Bystanders' Preferences of Privacy Awareness Mechanisms in Smart Homes.*  
Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems

## PROFESSIONAL EXPERIENCE

### Moderna, Inc

May 2023 – Now

*Software Engineer*

- Contributed to the front-end development of Moderna Direct's e-commerce site (facilitating the purchase of Moderna's vaccine products). Developed and implemented front-end design solutions and user interface systems, utilizing tools such as React, JavaScript, Redux, and Material UI.
- Collaborated cross-functionally with UX designers and engineers through extensive meetings to bridge communication gaps, ensuring features are user-friendly, technically feasible, and accessible.
- Translated Figma UI designs into functional code using the Material-UI component library, ensuring WCAG-compliant accessibility standards; integrated frontend with backend services using Redux for state management and API interactions.

### Zoom Video Communications, Inc

Jul 2022 – May 2023

*Front-end Engineer*

- Implemented essential features for Zoom's Chat platform, utilizing ReactJS as the primary framework and employing Typescript, SASS, and HTML5 as coding languages, with Mobx and RxJS for state management.
- Analyzed user behavior and identified 5+ pain points, creating user workflows and proposing solutions.

## RESEARCH EXPERIENCE

### Research on Peer programming in Computer Science Online Education

Sept 2021 - May 2022

*University of Michigan - Ann Arbor*

Advisor: Steve Oney

- Evaluated the effectiveness of grouping students by solution similarity in programming courses and its impact on their discussions and future coding diversity.
- Conducted one-hour user studies with 15 participants, collected and analyzed quantitative survey data and qualitative observations, using Excel and matrix analysis to evaluate participants' coding skills, interactions, and problem-solving processes.

### Research Assistant for The Lilypad Project

Jun 2021 – Jan 2022

*University of Michigan - Ann Arbor*

Advisor: Gabriela Marcu

- Designed and rebuilt the web version of the Lilypad project's admin panel—a platform that supports coordination between practitioners and caregivers who care for children with special needs, used by behavioral and mental health specialists record data on a daily basis to track a child's progress.
- Developed reproducible components using libraries (Material UI, React table) for product's user interface.

### Research on Smart Home Privacy

May 2020 - Oct 2020

*University of Maryland*

Advisor: Yaxing Yao

- Evaluated preferences and effectiveness of privacy-related notifications in smart homes, identifying the pros and cons of four privacy awareness mechanisms and key design considerations for future improvements.
- Conducted a survey with 136 users and 123 bystanders, analyzing the results using matrix analysis and content analysis to evaluate privacy-related notifications in smart homes.

## TEACHING EXPERIENCE

### SI579: Building Interactive Applications

Jan 2022 - May 2022 | University of Michigan

*Instructor: Ben Mullins*

### SI106: Programs, Information and People

Sep 2021 – Dec 2021 | University of Michigan

*Instructor: Steve Oney*

### SI579: Building Interactive Applications

Jan 2021 – May 2021 | University of Michigan

*Instructor: Steve Oney*

## SKILLS

- **Programming skills:** React, JavaScript, HTML5, CSS3, Git, Material-UI, Node.js ES6 and agile development. Strong in front-end development with good understanding of object-oriented programming.
- **UX Design skills:** Figma, Adobe Creative Suite, Miro, and Sketch for prototyping
- **Research skills:** Usability testing, Prototyping, Qualitative research methods and quantitative research methods.